

Remarks/Arguments

Claims 1 – 5, 8 and 9 are pending in the application. Claim 1 is independent.

In the present response, claims 1 – 5, 8 and 9 are amended. The support for the claim amendments may be found in Applicants' specification, for example, page 6, lines 19 – 21. No new matter is added.

Rejection of claims 1, 2, 4, 5, 8 and 9 under 35 U.S.C. §103(a) over Tsutsui et al. (US 2002/0060674, hereinafter Tsutsui)

Applicants submit that for at least the following reasons, claims 1, 2, 4, 5, 8 and 9 are patentable over Tsutsui.

For example, independent claim 1, in part, recites:

a coder for coding, for each image, the video information intended to be displayed by each of the elements of the valve, the video information being decomposed into two parts, a first part corresponding to a common value shared by a group of at least two adjacent elements of the valve and a second part corresponding to a specific value, and for transmitting them to said valve,...,

the specific drive circuit and the common drive circuit that are coupled to one and the same group of elements controlling the liquid crystals of the elements of the group in such a way as to alternately display the specific values and the common value of the video information relating to the elements of the group for an image. (Emphases added)

According to Tsutsui, an active matrix display is operated under two modes, the normal operation mode (first mode) and the memory mode (second mode). To choose between the first mode and the second mode, two selection circuits 40 and 43 are provided, the selection circuits select a first circuit dedicated to the first mode and a second circuit dedicated to the second mode (see for example [0039], [0045]). In response to a display mode selection signal, the first mode or the second mode is selected (see [0049] and [0054]).

However, in Tsutsui, there is no teaching that first and second modes may be active and be alternately applied to the same display (see for example [0016], [0018], [0020], [0039], [0045], [0049] – [0065], [0073] – [0077]). As described in [0065], the two modes disclosed in Tsutsui are independent from each other. Tsutsui's teaching can be applied to two kinds of displays, i.e. a fill color moving picture display (first mode) for high resolution and a digital level display (second mode) of low energy consumption with low-resolution. However, Tsutsui does not disclose or even suggest that any advantage might be obtained by permanently switching between the high-resolution mode (first mode) and the low-resolution mode (second mode).

In contrast to Tsutsui, Applicants' claim 1 requires that the video information is decomposed into two parts, a first part corresponding to a common value shared by a group of at least two adjacent elements of the valve and a second part corresponding to a specific value, and that specific drive circuit and common drive circuit are coupled to one and the same group of elements controlling the liquid crystals of the elements of the group in such a way as to alternately display the specific values (second part) and the common value (first part) of the video information relating to the elements of the group for an image.

Therefore, Tsutsui does not teach or suggest the above claimed features.

Applicants' invention as claimed in claim 1 solves a technical problem of reducing a valve's dimensions and decreasing its manufacturing cost (see, for example, Applicants' specification, page 3, lines 25 – 31). A unique advantage of Applicants' invention is that it reduces the number of transistors and of capacitors of the drive circuit in comparison to the state of the art, by having some transistors and capacitors shared between several liquid crystals. As illustrated in Applicants' Figs. 5 and 7, a single transistor T3 and a single capacitor CS2 are used for each group of at least two elements of the valve. By contrast, in the state of the art (see, for example Figs. 1, 3 and 4 of Applicants' specification), each element of a valve comprises one transistor T3 and one capacitor CS2. In an architecture according to one of Applicants' embodiments, in which the elements of the valve are grouped together in groups of at least 2 elements, it is possible to dispense with at least one transistor and at least one

capacitor for each group of at least 2 elements of the valve (i.e. 1 transistor and 1 capacitor for each group of 2 element (see, for example, Applicants' specification, page 9, lines 24 – 29) and 3 transistors and 3 capacitors for each group of 4 elements (see, for example, Applicants' specification, page 11, lines 1 – 4).

The grouping of several elements of a valve is possible by using a special coding of the video information and a special addressing of the coded video information in the valve, (see, for example, Applicants' specification on page 6, lines 17 – 37). In one of Applicants' embodiments, the video information to be displayed on each element of the valve is coded as to be decomposed into two parts: the first part corresponding to a value common to a group of at least two elements (e.g., two pixels) and the second part corresponding to a value specific to each single element (e.g., each pixel). By simultaneously addressing the at least two elements of a group elements, it is possible to transmit the common value of the video information to be displayed by the elements of the group, the common value being stored by the single second capacitor CS2 of the common drive circuit, the common drive circuit being associated to the group of at least two elements.

The above discussed unique advantages are not recognized or suggested by any of the cited references. Therefore, a skilled person would not find it obvious to modify the teaching of Tsutsui to arrive at the claimed invention.

In view of at least the foregoing, Applicants submit that claim 1 is patentable over Tsutsui.

Dependent claims 2, 4, 5, 8 and 9 are patentable for at least the reason that they depend from and inherit all the features of claim 1, with each dependent claim containing further distinguishing features.

Rejection of claim 3 under 35 U.S.C. §103(a) over Tsutsui in view of Richards et al. (US 2004/0155856, hereinafter Richards)

Applicants submit that Richards does not in any way cure the deficiencies present in Tsutsui as discussed above with respect to claim 1. Therefore, claim 3 is

patentable for at least the reason that it depends from and inherits all the features of claim 1, with further distinguishing features.

Withdrawal of the rejection of claims 1 – 5, 8 and 9 under 35 U.S.C. §103(a) is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that all the claims pending in this patent application are in condition for allowance. Entry of this amendment, reconsideration of the application, and allowance of all the claims are respectfully solicited.

In the event there are any errors with respect to the fees for this response or any other papers related to this response, the Director is hereby given permission to charge any shortages and credit any overcharges of any fees required for this submission to Deposit Account No. 07-0832.

Respectfully submitted,

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March 7, 2012

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